Message

From: Worstell, Aaron [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=301B4DCDDCA444358ACA99C31B357742-WORSTELL, AARON]
Sent: 11/26/2018 9:17:52 PM
To: Beaver, Melinda [Beaver.Melinda@epa.gov]
Subject: FW: Consideration of Any Existing Controls Coal Creek Station
Attachments: Decision ND RH - 121844P.pdf; Envtl_Coal_Creek_Comments_05-29-2018.pdf; Coal Creek Station Monthly Emissions Through 3Q 2018.xlsx

Hi Melinda-

I meant to send this to you too.

From: Worstell, Aaron
Sent: Wednesday, November 21, 2018 12:22 PM
To: Lorang, Phil <Lorang.Phil@epa.gov>; Greenglass, Nora <Greenglass.Nora@epa.gov>
Cc: Boydston, Michael <Boydston.Michael@epa.gov>; Jackson, Scott <jackson.scott@epa.gov>; Morales, Monica <Morales.Monica@epa.gov>
Subject: Consideration of Any Existing Controls Coal Creek Station

Hi Phil and Nora-

I am writing to get your input on the issue of any existing controls for Coal Creek Station (CCS) in North Dakota. CCS is owned and operated by Great River Energy (GRE). The two BART units at CCS are identical with the exception of the combustion controls currently installed.

As you may recall, we proposed approval of ND's 2013 SIP supplemental for CCS, but then decided not to finalize after receiving some very challenging comments from the conservation organizations. Among those comments, we were challenged on ND's approach to any existing controls (see pages 12-13 of attached comment letter). And this was also the issue over which the 8th circuit vacated our 2012 BART FIP for CCS (see pages 16-18 of attached decision). The FIP would have required both units be equipped with SNCR/LNC3+.

Also recall that GRE upgraded the combustion controls on Unit 2 from LNC3 to LNC3+ in mid-2017. GRE has not done the same on Unit 1. Both units use DryFining. See chart in attached Excel spreadsheet for emission trends (monthly).

I propose the following:

- The new BART analysis should use recent actual annual emissions for the baseline for Units 1 and 2, reflecting all currently installed controls
- The baseline for Unit 1 of roughly 0.20 lb/MMBtu (annual) would reflect DryFining and LNC3 (no plus).
- The baseline for Unit 2 of roughly 0.15 lb/MMBtu (annual) would reflect DryFining and LNC3+.
- Controls analyzed for Unit 1 will include LNC3+, SCNR with LNC3+, and SCR with LNC3+.
- Controls analyzed for Unit 2 will include SCNR and SCR. Again, LNC3+ is already installed.

Taking this approach will result in a different set of $/ton metrics betwwn Units 1 and 2. Using some old numbers which will change in the new BART analysis, conceptually, the proposed approach would yield cost effectiveness values something like this:

Control Option	Emission Reductions (tons/yr)	Annualized Cost ($)	Cost Effectiveness ($/ton)	Incremental Cost Effectiveness ($/ton)
Unit 1 (Currently equipped with LNC3 and Dry Fining)				
SCR+LNC3+	4,286	56,150,000	13,101	22,625
SNCR+LNC3+	1,998	4,385,000	2,195	4,619
LNC3+	1,214	764,000	629	---
Unit 2 (Currently equipped with LNC3+ and DryFining)				
SCR	3,072	55,386,000	18,029	22,625
SNCR	784	3,621,000	4,619	---

As you would expect the incremental cost effectiveness for SNCR+LNC3+ over LNC3+ for Unit 1 is equal to the average cost effectiveness for SNCR for Unit 2 because LNC3+ gets "cancelled out" mathematically for the former.

Though the $/ton metrics vary between Unit 1 and 2, it would be illogical to arrive at different BART determinations given that the units are identical with the exception of Unit 2 having LNC3+. The question is really whether it is reasonable to install SNCR (or SCR) after upgrading the combustion controls to LNC3+.

Please let me know if you concur with this approach. And if not, what approach you would recommend.

We have a call with ND and GRE on December 10th regarding the new BART analysis. I kindly ask that you provide your input by December 5th.

I realize this is a convoluted issue, so please call me if you have questions. I'm also happy to set up a conference call if needed.

Thanks in advance and Happy Thanksgiving!

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What is wanted is not the will to believe, but the wish to find out, which is the exact opposite. -Bertrand Russell